

NAVSHIPS 91771.42

APPROVED MANUSCRIPT
MAINTENANCE STANDARDS BOOK
FOR
RADIO RECEIVING SET
AN/URR-27

SERIAL _____

PREPARED BY
PHILCO CORPORATION
PHILADELPHIA, PENNSYLVANIA

BUREAU OF SHIPS · NAVY DEPARTMENT · WASHINGTON 25, D.C.

CONTRACT: NObsr 71220

APPROVED BY BUSHIPS: 12 JUNE 1957
CHANGE 1, 1 SEPTEMBER 1960

Temporary Corrections to NAVSHIPS 91771.42,
Maintenance Standards Book for Radio Receiving Set AN/URR-27

The purpose of this temporary correction is to reschedule the maintenance steps in Part II, and to combine Monthly steps 2 and 3. The table provided herein shows the intervals for performing the various steps of Part II. Steps prefixed with an asterisk require new check-off charts. The new check-off charts should be inserted at the applicable places in Part II. Delete all check-off charts made obsolete by the addition of new charts. This temporary change should be inserted in the maintenance standards book in front of the title page.

Make the following pen-and-ink corrections in the book:

(1) Part I - Section E, page 17, below Operating Conditions and Control Settings: change the word "disconnected" to "connected". Delete all references to step 3.

(2) Part II - page 25: Delete step 3 and all references to step 3.

| Daily | | Weekly | | Monthly | | Quarterly | | Semiannual | | Annual | | Unsched. | |
|-------|------|--------|------|---------|------|-----------|------|------------|------|--------|------|----------|------|
| Step | Page | Step | Page | Step | Page | Step | Page | Step | Page | Step | Page | Step | Page |
| | | *Q5 | 31 | M5 | 27 | W1 | 24 | S1 | 33 | | | D1 | 21 |
| | | | | M7 | 29 | W2 | 24 | | | | | | |
| | | | | M6 | 29 | W3 | 24 | | | | | | |
| | | | | M1 | 25 | Q3 | 31 | | | | | | |
| | | | | M2 | 25 | Q4 | 31 | | | | | | |
| | | | | | | Q6 | 31 | | | | | | |
| | | | | | | Q1 | 30 | | | | | | |
| | | | | | | Q2 | 30 | | | | | | |

STEP 5

Enter the name of the month in which the maintenance step is begun in the first empty block of the top row. Fill in the names of the months consecutively thereafter for a period of two years. Initial the chart and log the result after performing step Q5.

| | | | | | | | | | | | | | | |
|---|-------|------------|------------|--|--|--|--|--|--|--|--|--|--|--|
| 5 | Month | | | | | | | | | | | | | |
| | Week | a. μv | | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | 1 | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |
| 2 | | a. μv | | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |
| | 3 | | a. μv | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |
| 4 | | | a. μv | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |
| | 5 | | a. μv | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---|-------|------------|------------|--|--|--|--|--|--|--|--|--|--|--|
| 5 | Month | | | | | | | | | | | | | |
| | Week | a. μv | | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | 1 | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |
| 2 | | a. μv | | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |
| | 3 | | a. μv | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |
| 4 | | | a. μv | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |
| | 5 | | a. μv | | | | | | | | | | | |
| | | b. μv | | | | | | | | | | | | |
| | | c. μv | | | | | | | | | | | | |
| | | Initial | | | | | | | | | | | | |

PERMANENT CHANGE 1 TO MAINTENANCE STANDARDS BOOK
FOR RADIO RECEIVING SET AN/URR-27
NAVSHIPS 91771.42

1. As a result of Change 1, the action listed in the following chart should be performed upon receipt of this instruction sheet.

| PAGE | REMOVE | INSERT |
|--------------|-----------|-------------|
| Title Page/A | ORIG/ORIG | CHG 1/CHG 1 |
| D/E | ORIG/ORIG | CHG 1/ORIG |
| 1/11 | ORIG/ORIG | CHG 1/ORIG |
| 3/4 | ORIG/ORIG | CHG 1/ORIG |
| 7/8 | ORIG/ORIG | CHG 1/ORIG |
| 9/10 | ORIG/ORIG | ORIG/CHG 1 |
| 11/12 | ORIG/ORIG | CHG 1/ORIG |
| 13/14 | ORIG/ORIG | ORIG/CHG 1 |
| 15/16 | ORIG/ORIG | CHG 1/ORIG |
| 31/32 | ORIG/ORIG | CHG 1/ORIG |

2. Complete Change 1 Reference Standards Summary sheet as follows:

(a) Perform related steps of all reference standards affected by Change 1 and record each new reference standard in the appropriate space in Change 1 Summary sheet.

(b) Transfer originally recorded reference standards not affected by Change 1, to Change 1 summary sheet. Forward Change 1 summary sheet to Bureau of Ships as directed.

3. Insert this instruction sheet in the Maintenance Standards Book NAVSHIPS 91771.42 immediately after the front cover.

4. After the complete book has been checked against the List of Effective Pages, destroy all pages removed.

5. Record completion date of Change 1 on Correction Page.

RADIO RECEIVING SET AN/URR-27
NAVSHIPS 91771.42
MAINTENANCE STANDARD SUMMARY

Model _____
Serial No. _____
Installed in _____
Ship or Station _____

After the equipment has been brought up to optimum performance and standards accomplished, record on this Summary-sheet the test indications which have been entered in this book. Forward this Summary-sheet to Chief, Bureau of Ships, Navy Department, Washington 25, D. C., Attn: Code 975.

| Step No. | Ref. Std. | Step No. | Ref. Std. |
|-----------|---------------|-----------|-------------------|
| Section A | | Section D | |
| 1 | _____ VAC | 1 | _____ MC |
| 2 | _____ VDC | | _____ MC |
| 3 | _____ VDC | | _____ kc |
| 4 | _____ VDC | 2 | (a) _____ μ v |
| | | | (b) _____ μ v |
| | | | (c) _____ μ v |
| Section B | | | |
| 1 | _____ VAC | 3 | _____ VDC |
| 2 | _____ VAC | 4 | _____ VDC |
| | _____ VAC | 5 | _____ VDC |
| 3 | _____ μ v | 6 | _____ VDC |
| | | | _____ μ v |
| Section C | | | |
| 1 | _____ VDC | | |
| 2 | _____ μ v | | |
| | _____ μ v | | |
| | _____ μ v | | |
| | _____ μ v | | |
| | _____ μ v | | |
| | | Section E | |
| | | 1 | _____ ohm |
| | | 2 | _____ meg |
| | | 3 | _____ meg |

Length of transmission line _____

List all field changes which have been accomplished on this equipment _____

Signature _____

Title-Position _____

Date _____

FRONT MATTER



DEPARTMENT OF THE NAVY
BUREAU OF SHIPS
WASHINGTON 25, D. C.

IN REPLY REFER TO
Code 993-100
12 June 1957

From: Chief, Bureau of Ships
To: All Activities concerned with the Operation, and
Maintenance of the Subject Equipment

Subj: "Approved Manuscript" Maintenance Standards Book for
Radio Receiving Set AN/URR-27, NAVSHIPS 91771.42

1. This is the Maintenance Standards Book for the subject equipment. It is in effect upon receipt. This publication applies only to the equipment, the serial number of which appears on the cover and title page.
2. When superseded by a later edition, this publication shall be destroyed.
3. Extracts from this publication may be made to facilitate the preparation of other Department of Defense publications.
4. Errors found in this publication (other than obvious typographical errors), which have not been corrected by means of Temporary Corrections or Permanent Changes, should be reported. Such report should include the complete title of the publication and the publication number (short title); identify the error or figure and location of the error; describe the error or indicate what change should be made; and be forwarded to the Electronics Publications Section of the Bureau of Ships.
5. All Navy requests for NAVSHIPS electronics publications should be directed to the nearest Bureau of Supplies and Accounts Forms and Publications Supply Point. When changes or revised books are distributed, notice will be included in the Electronics Information Bulletin, NAVSHIPS 900,022, and in the Index of Bureau of Ships General and Electronics Publications, NAVSHIPS 250-020.

A. G. MUMMA
Chief of Bureau

ORIGINAL

B

[illegible]

INTRODUCTION

This Maintenance Standards Book is to be assigned permanently to a specific installation of Radio Receiver AN/URR-27.

The tests prescribed herein provide the engineer and maintenance (or operating) personnel with a systematic and efficient method for checking the above equipment, and for performing routine preventive maintenance. This book contains a series of maintenance standard test procedures which provide indications representing top performance of the specific equipment, and a series of maintenance check-off procedures which, when performed as directed, will detect impending failures before they occur.

Upon receipt of this book, record the serial number of the equipment to which this book is assigned. Enter the serial number, in ink, in the space provided on both the cover and the title page.

The book is divided into two parts. Part I, Test Procedures and Maintenance References, contains maintenance standard tests which, when properly performed, provide indications representing top performance of individual circuits and/or functional sections of the subject equipment—these indications also characterize over-all top performance of this equipment. Part II, Preventive Maintenance Check-Off, contains a schedule for efficient preventive maintenance of the equipment.

Prior to performing Maintenance Standards, Part I, it shall be ascertained that the equipment is operating at its design capabilities. After proper operation of the equipment has been established the tests in Part I are to be accomplished by qualified personnel and the indications therefore recorded. These recorded values are Reference Standards and are not to be altered except when yard overhaul or major field change warrants such revision.

The preventive maintenance tests, in Part II, provide maintenance (or operating) personnel with a systematic method for performing preventive maintenance routines to maintain the operating efficiency of the equipment. If the tests are performed as directed, they will provide an equipment performance history. With a little reasoning, a technician can tell very quickly how the equipment is performing and detect impending failures before they occur.

Any field changes that are made to the equipment must be entered on page D of this book by the person making the field change; this entry should be followed by his initials, in the space provided. If the field change should require a change in any of the steps in this book, the steps must be changed, in ink, on the applicable pages, so as to provide maintenance (or operating) personnel with an accurate method for testing the equipment.

FRONT MATTER

TEST EQUIPMENT (OR EQUIVALENT) TO BE USED

R-F Signal Generators:

R. F. Signal Generator Set AN/URM-26 Series

R. F. Signal Generator Set AN/URM-25 Series

Frequency Meters:

Frequency Meter TS-186/U Series

Frequency Meter LM Series

Audio Oscillators:

Audio Oscillator TS-382/U Series

Electronic Multimeters:

Multimeter AN/USM-34 or

Multimeter ME-25/U Series

Multimeters:

Multimeter AN/PSM-4 Series or

Multimeter TS-352/U

Megohmmeters:

Insulation Test Set AN/PSM-2 Series or

OCW Insulation Resistance Tester

Output Meters:

Output Meter TS-585/U Series or

ME-6A/U, -6B/U, -6C/U, or -6D/U

shunted with a 600-ohm, non-inductive
resistor.

Miscellaneous:

Headphone H-1/AR or

H-4/AR

SPECIAL PROCEDURES

When making the checks prescribed in this Maintenance Standards Book, it is recommended that the receiver be removed from its case. In addition, the filter unit on the back of the case should be unsnapped and removed through the inside of the case. After removal, plug the filter unit onto the back of the receiver chassis. In this manner, all test points will be available with the receiver in full operation. The antenna, audio output load, and 50-ohm scan connection are not required for any of these tests, and should be disconnected. The A. C. POWER connection should be maintained.

Before proceeding with any of the tests in this book, place the front panel controls of the

receiver in the following positions:

CRYSTAL-MANUAL switch (S203): MANUAL
N. L. switch (S202): OUT
SILENCER switch (S501): OUT
A. F. LEVEL control (R238): fully clockwise
ALIGN-REC. switch (S201): REC
PHONES control (R502): 8
POWER switch (S502): ON

At the top of each chart page, operating conditions and control settings are given. These are to be established before proceeding with the tests. After a test is completed, the conditions and control settings should remain for the following test unless a new set of conditions or control settings is given.

FRONT MATTER

SAFETY NOTICE

The attention of officers and operating personnel is directed to Chapter 18 of the Bureau of Ships Manual or Superseding instructions on the subject of Radio-Safety precautions to be observed.

While every practicable safety precaution has been incorporated in this equipment, the following rules must be strictly observed:

KEEP AWAY FROM LIVE CIRCUITS

Operating personnel must at all times observe all safety regulations. Do not change tubes or make adjustments inside equipment with high voltage supply on. Under certain conditions dangerous potentials may exist in circuits with power controls in the off position due to charges retained by capacitors. To avoid casualties always remove power and discharge and ground circuits prior to touching them.

DON'T SERVICE OR ADJUST ALONE

Under no circumstances should any person reach within the enclosure for the purpose of servicing or adjusting the equipment without the immediate presence or assistance of another person capable of rendering aid.

DON'T TAMPER WITH INTERLOCKS

Do not depend upon door switches or interlocks for protection, but always shut down generators or other power equipment. Under no circumstances should any access gate, door or safety interlock switch be removed, short circuited, or tampered with in any way, by other than authorized maintenance personnel, nor should reliance be placed upon interlock switches for removing voltages from the equipment.

RESUSCITATION

AN APPROVED POSTER ILLUSTRATING THE RULES FOR RESUSCITATION BY THE BACK-PRESSURE, ARM-LIFT METHOD SHALL BE PROMINENTLY DISPLAYED IN EACH RADIO, RADAR, OR SONAR ENCLOSURE. POSTERS MAY BE OBTAINED UPON REQUEST TO THE BUREAU OF MEDICINE AND SURGERY.

MAINTENANCE STANDARDS PART I, TEST

PROCEDURES AND MAINTENANCE REFERENCES

The maintenance standards test indications for this part of the book are to be established and recorded upon completion of installation, and these recorded values should be altered only when a yard overhaul or major field change necessitates such revision. Before establishing the test indications, personnel qualified on this equipment shall first check the equipment thoroughly, and make any necessary adjustments, to ensure that all circuits are operating to the maximum of their design capabilities. When it has been established that the equipment is operating properly the steps are to be performed by qualified personnel and all results are to be entered, in ink, in the REF. STD. column of the charts in Part I of this book. The procedures designated by step numbers enclosed in stars ($\star 1$, $\star 2$, etc.) are referred to in the Performance Standards Sheet for this equipment.

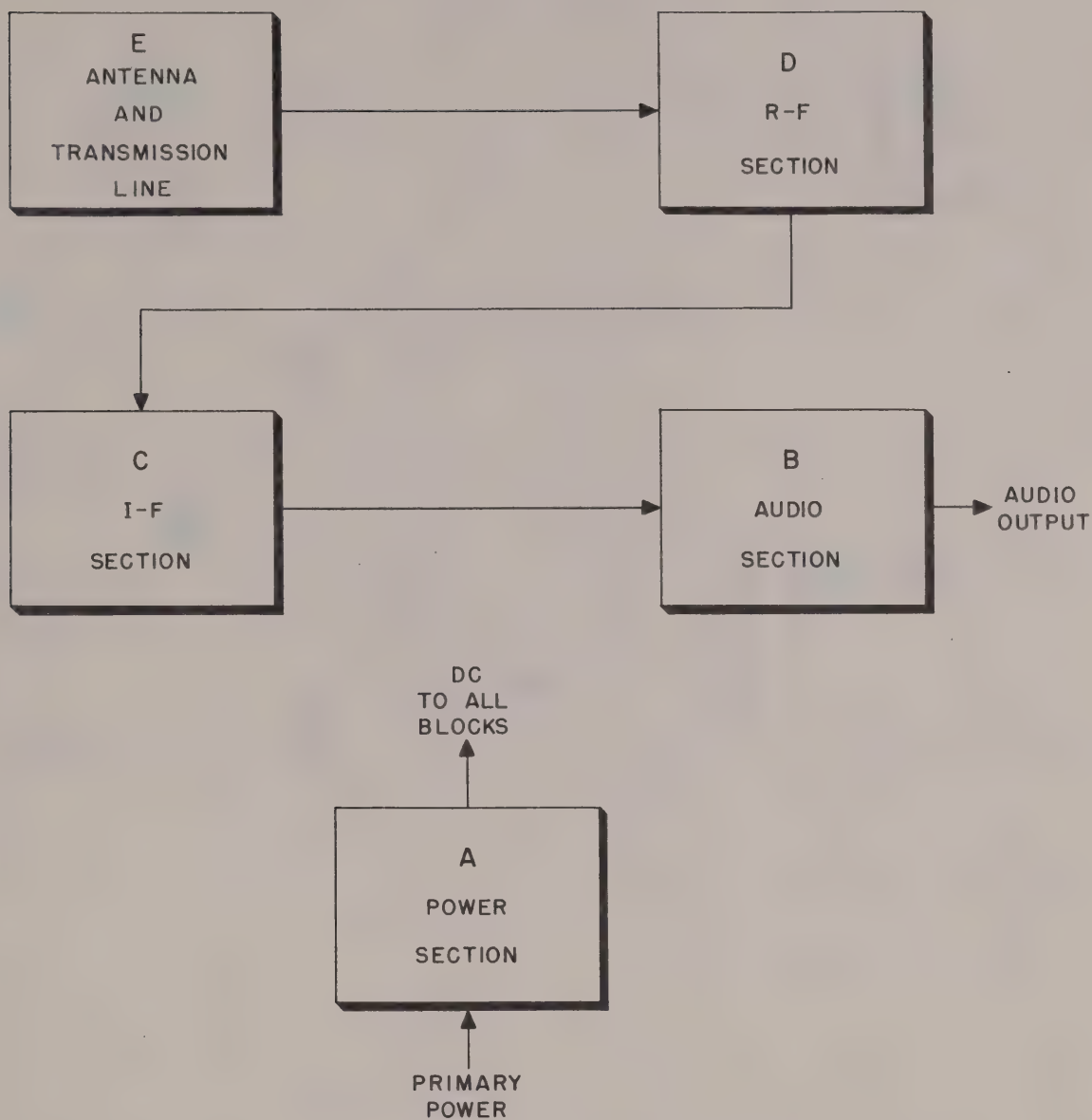
The procedures for obtaining the maintenance standard test indications are given in a series of charts; each chart, or group of charts, covers a functional section of the equipment. Each section is designated by a letter (A, B, etc.). These designations are identified on the block diagram, page 1.

At the top-right of the first chart page for each functional section is a list of the test equipment, if any, required to properly perform the checks in that section. At the top-left of each chart page is a list of operating conditions and control settings. These apply to the entire page unless other conditions and settings are given for some of the steps.

The illustration page facing each chart page shows the equipment setup pertaining to each of the procedural steps of that chart page, and each setup carries a "step" number (enclosed in either a circle or a star) corresponding to the step of the chart to which it applies. Arrows leading from this "step" number graphically present certain basic information given in the associated step of the chart, as follows: The point where the test equipment is to be connected; the setting of the pertinent control or switch; and the indicator from which the test reading is to be taken.

The tolerances shown in parentheses in the REF. STD. column are not absolute limits; they are intended only to serve as a general guide.

The front part of the book contains a Test Procedures and Maintenance References Summary (tearout sheet). After the tests have been performed, record on this Summary sheet all the standards obtained and a list of all Field Changes that have been made, and forward the sheet to the address shown thereon.



Functional Sections

A - Power

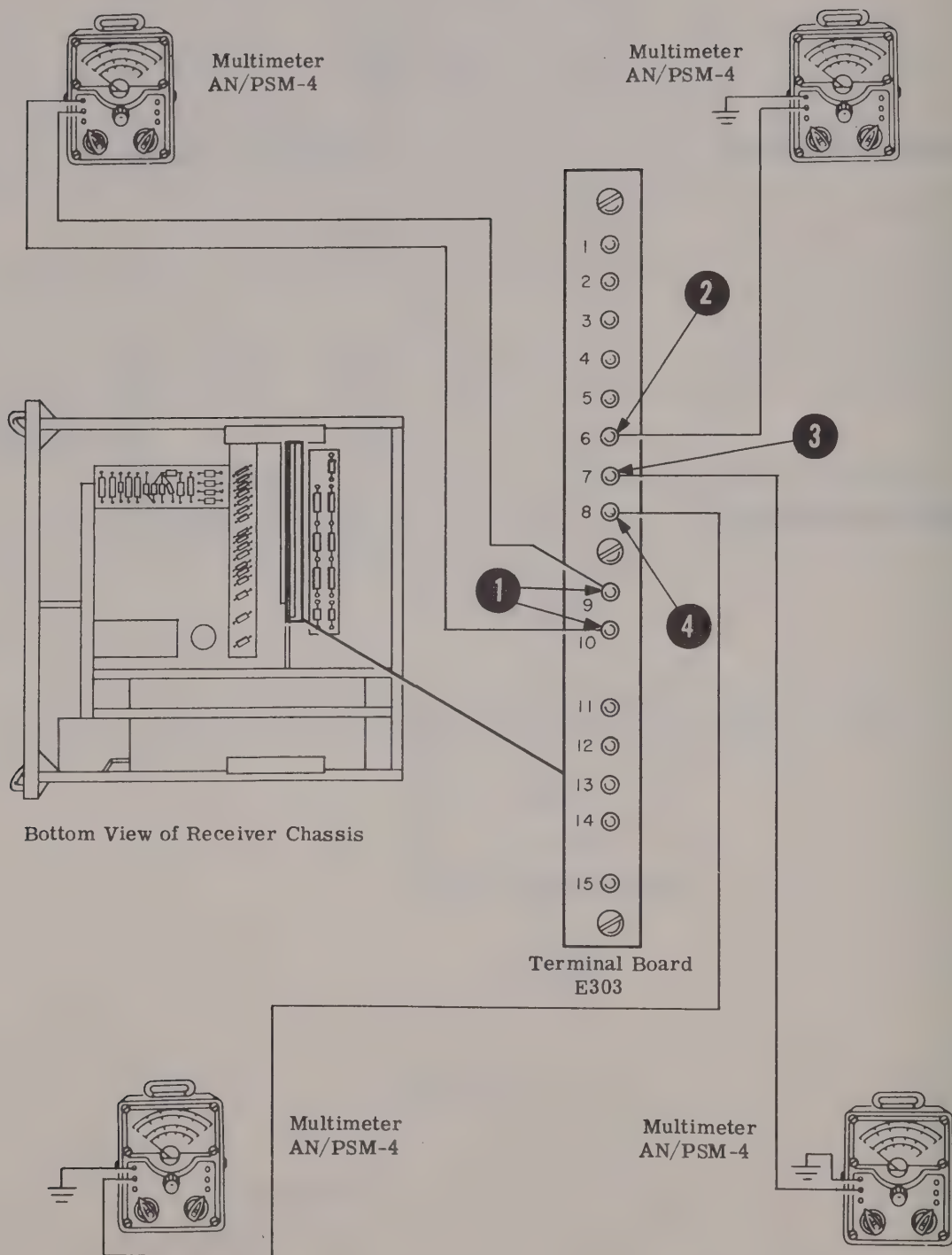
D - R-F

B - Audio

E - Antenna, and

C - I-F

Transmission Line

Steps **1** thru **4**

AN/URR-27

Steps **1** thru **4**

POWER SECTION

Operating Conditions and Control Settings:

Test Equipment Required:

As given in Special Procedures.

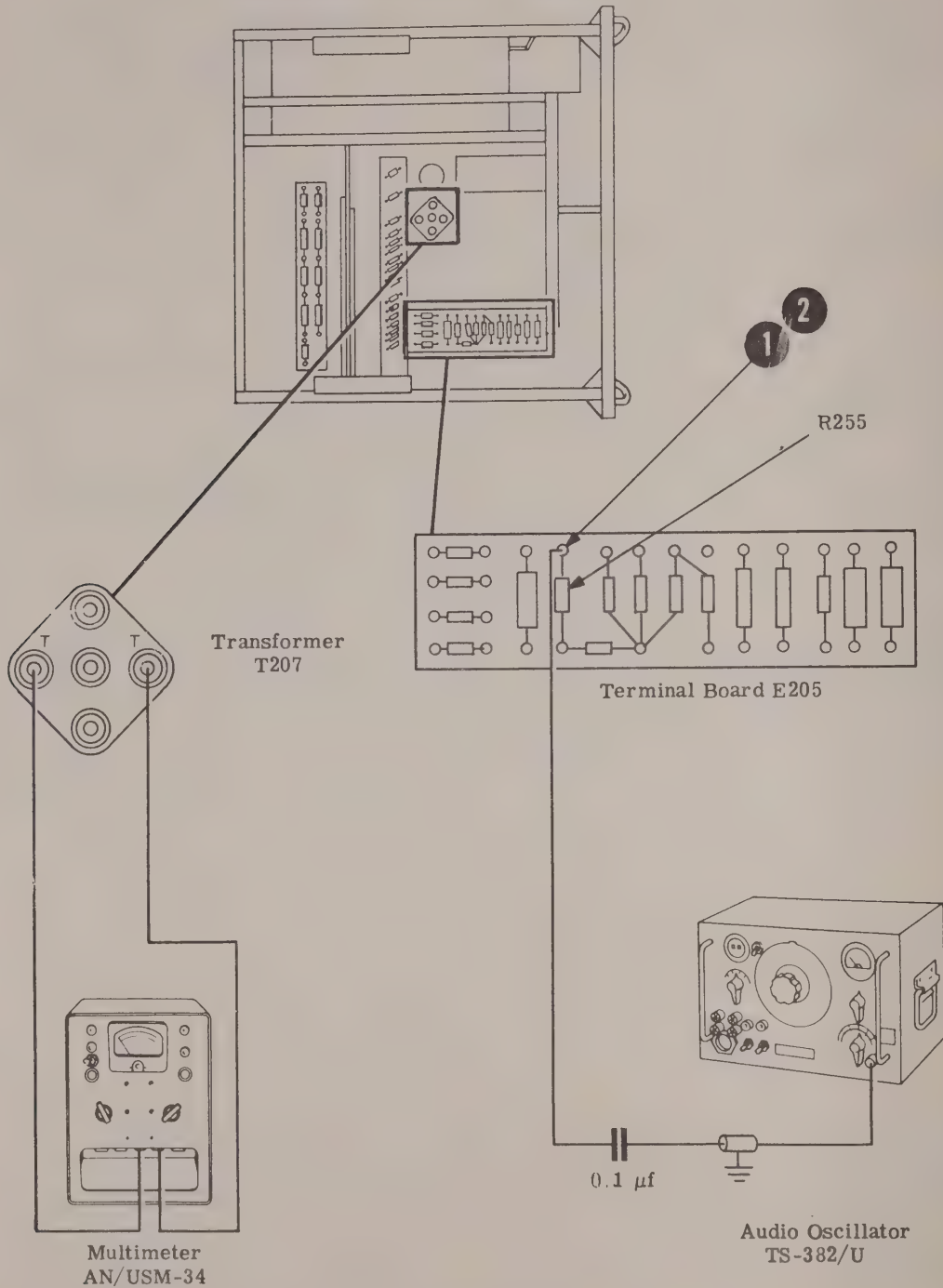
Multimeter AN/PSM-4

| STEP | | PRELIMINARY ACTION | READ INDICATION ON | REF. STD. |
|----------|---|---|--------------------------|--------------------------|
| NO. | ACTION REQUIRED | | | |
| 1 | Record primary input voltage to receiver. | Withdraw receiver from case and stand on side. Connect Multimeter AN/PSM-4, using 200-volt, a-c scale, between terminals 9 and 10 of terminal strip E303, as shown on opposite page. | Multimeter AN/PSM-4 | ____ VAC (105 to 125) |
| 2 | Record -- 3 volt bias voltage. | Disconnect multimeter from terminals 9 and 10 of terminal strip E303 and reconnect as shown on opposite page, using 10-volt, d-c scale (reverse). | Multimeter AN/PSM-4 | ____ VDC (-2 to -4) |
| 3 | Record B supply voltage. | Disconnect multimeter from terminal 6 and change multimeter scale to 400-volt, d-c scale (direct). Connect positive test lead to terminal 7, leaving negative lead connected to receiver chassis. | Multimeter AN/PSM-4 | ____ VDC (160 to 200) |
| 4 | Record regulated B supply voltage. | Disconnect multimeter from terminal 7. Using the 200-volt, d-c scale (direct) connect positive test lead to terminal 8 leaving negative lead connected to receiver chassis. | Multimeter AN/PSM-4 | ____ VDC (103 to 107) |

Steps 1 and

2

Bottom View of Receiver Chassis



AUDIO SECTION

Operating Conditions and Control Settings:

Test Equipment Required:

As given in Special Procedures.

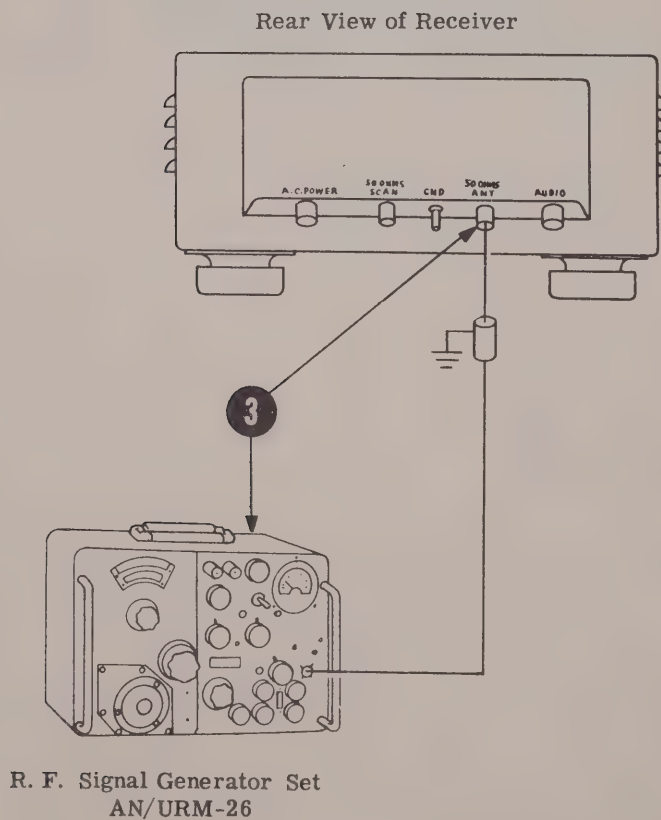
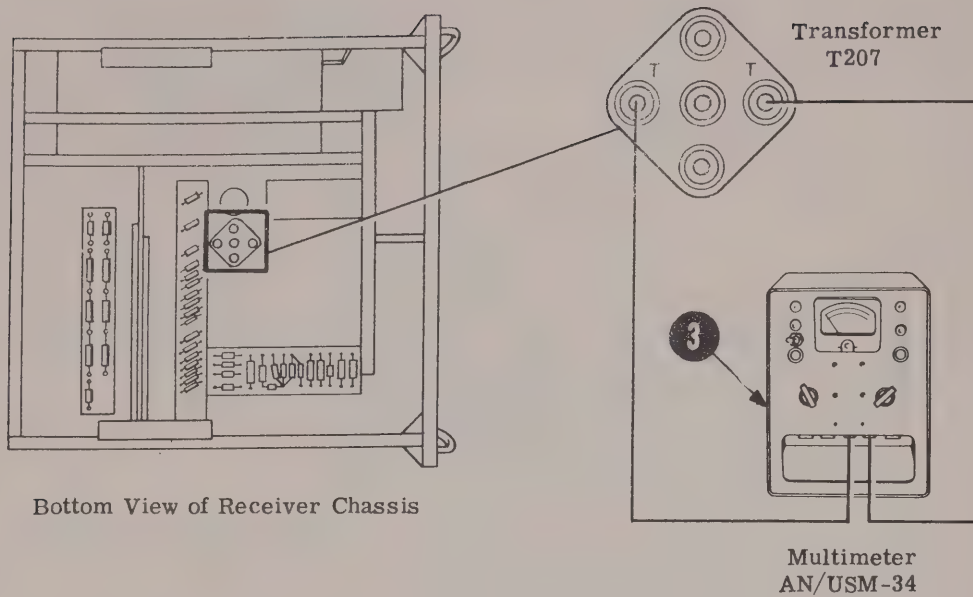
Audio Oscillator TS-382/U

Multimeter AN/USM-34

R. F. Signal Generator Set AN/URM-26

| STEP | | PRELIMINARY ACTION | READ INDICATION ON | REF. STD. |
|----------|--|--|--------------------------|---------------------------|
| NO. | ACTION REQUIRED | | | |
| 1 | Record audio gain. | Withdraw receiver chassis from case and stand on side. Connect audio oscillator output to pin 1 (upper end of resistor R255) of tube V209. Adjust audio oscillator output to 20 millivolts at a frequency of 1000 cycles. Set multimeter to X10 scale, AC. | Multimeter AN/USM-34 | ____ VAC (4 to 8) |
| 2 | Record audio response at high and low ends of range. | Adjust audio oscillator to 200 cycles, maintaining oscillator output at a constant level of 20 millivolts. | Multimeter AN/USM-34 | ____ VAC (less than 1) |
| | | Adjust audio oscillator to 6000 cycles, maintaining oscillator output at a constant level of 20 millivolts. | Multimeter AN/USM-34 | ____ VAC (less than 1) |

Step **3**



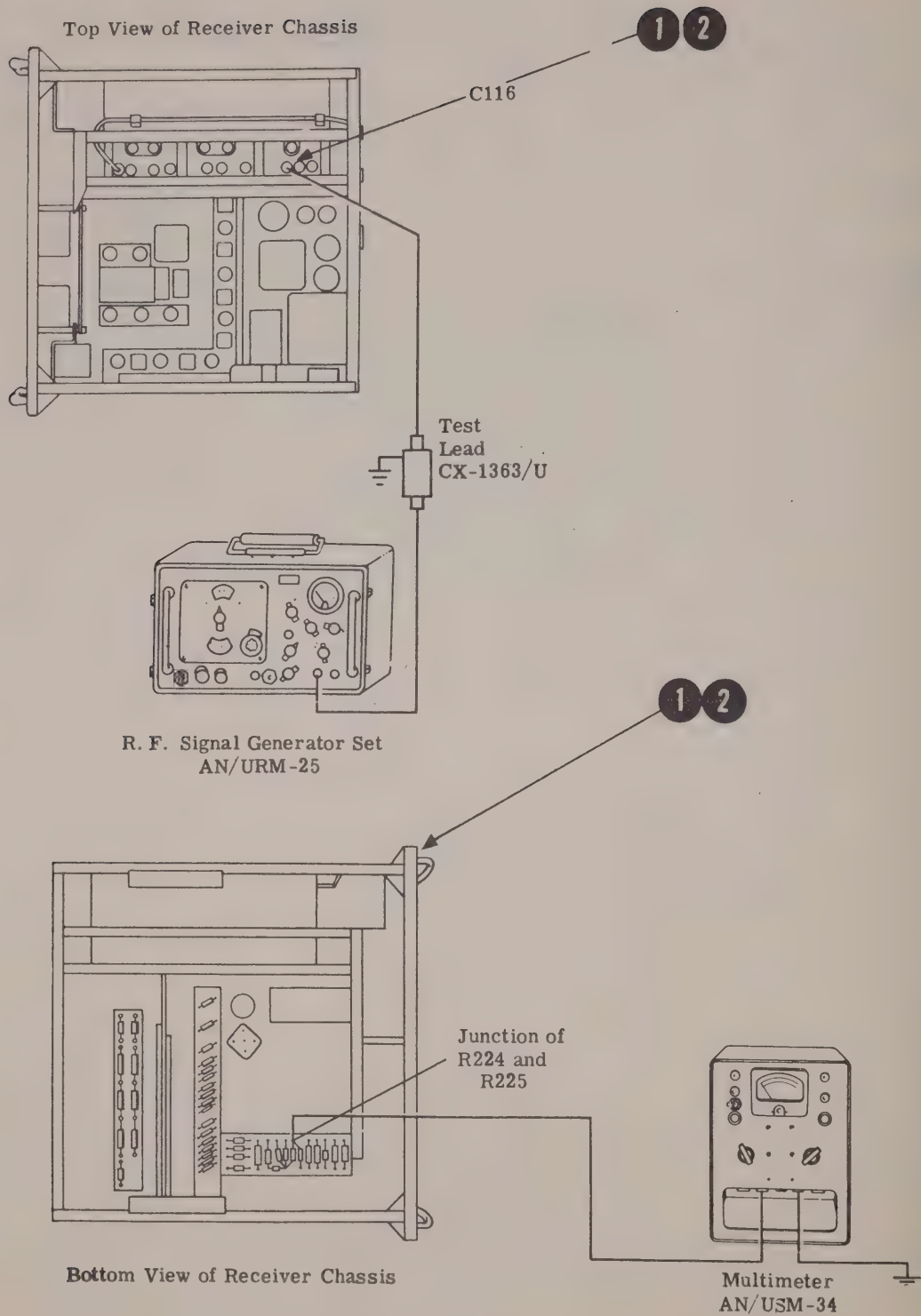
AUDIO SECTION

Operating Conditions and Control Settings:

As given in Special Procedures.

| STEP | | PRELIMINARY ACTION | READ INDICATION ON | REF. STD. |
|----------|---------------------------------------|---|--|---------------------------|
| NO. | ACTION REQUIRED | | | |
| 3 | Record operation of silencer circuit. | Connect test equipment as shown on opposite page. Set multimeter to X10 range, AC. At receiver, throw SILENCER switch (S501) to IN and adjust SILENCER screwdriver control to point of silent operation. Adjust signal generator, using 1000-cycle modulation at 30%, for 1-microvolt output and at same frequency as that of receiver. Rock receiver tuning control to tune receiver to signal generator frequency. Slowly advance signal generator attenuator until multimeter indicates 6-volts. | Attenuator of R. F. Signal Generator Set AN/URM-26 | _____ μ V (1 to 3) |

Steps **1** and **2**



I-F SECTION

Operating Conditions and Control Settings:

Test Equipment Required:

As given in Special Procedures.

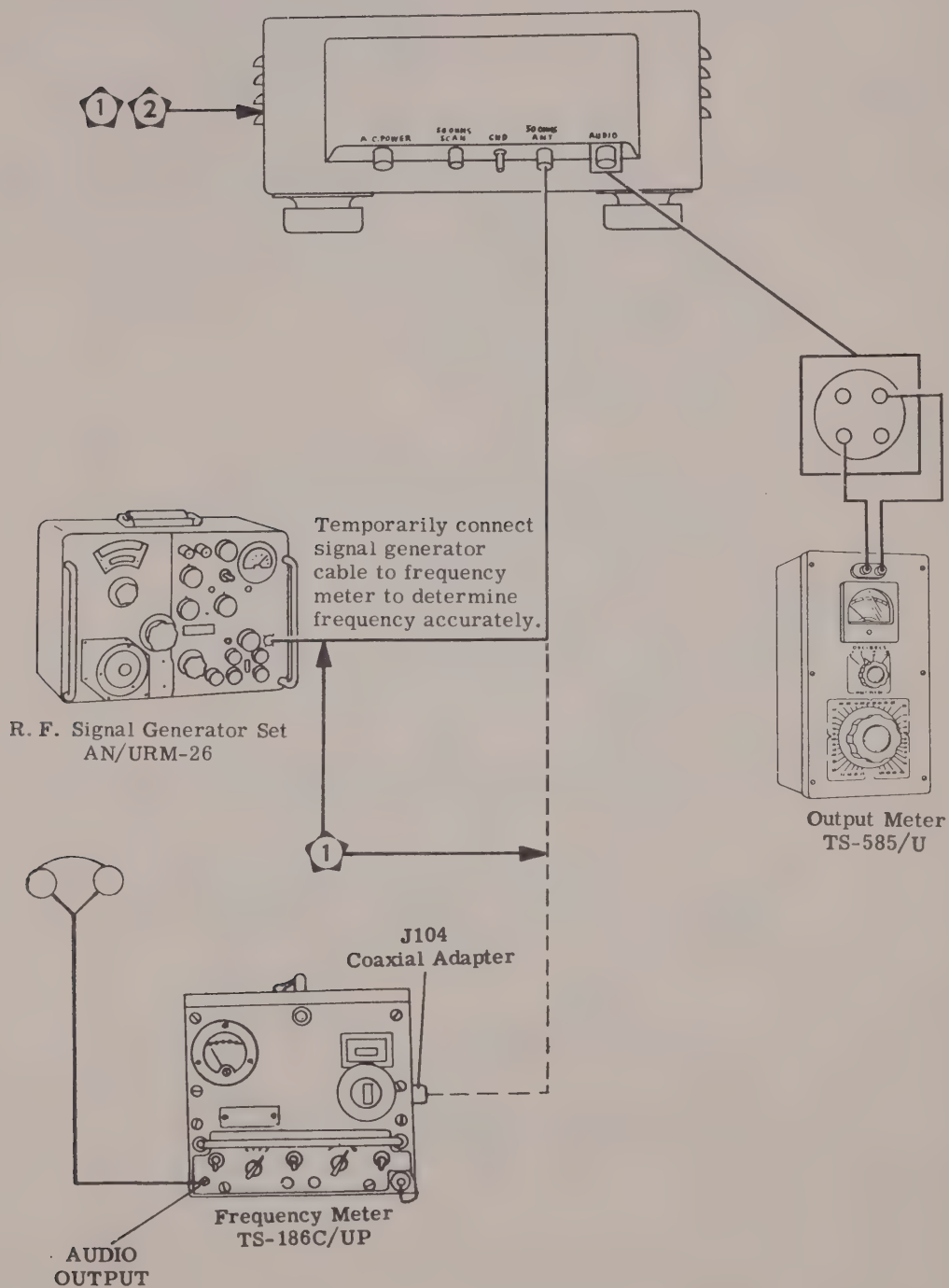
R. F. Signal Generator Set AN/URM-25
Multimeter AN/USM-34

| STEP | | PRELIMINARY ACTION | READ INDICATION ON | REF. STD. |
|----------|-------------------------|--|--|------------------------------|
| NO. | ACTION REQUIRED | | | |
| 1 | Record i-f gain. | Remove crystal from front of receiver and turn OSC. switch to CRYSTAL. Connect r-f signal generator to C116 as shown on opposite page. Adjust signal generator to approximately 18,600 kc and an output of 200 microvolts. Rock signal-generator tuning control to obtain maximum reading on multimeter set to X10 scale, -DC. | Multimeter AN/USM-34 | ____ VDC (-0.1 to -0.9) |
| 2 | Record i-f selectivity. | With equipment connected as in step 1, adjust signal generator to 18,500 kc. Adjust output of signal generator until same indication is obtained on multimeter as in REF. STD. column of step 1. *See Note | Attenuator of R. F. Signal Generator Set AN/URM-25 | ____ μ V (Above 1900) |
| | | Adjust signal generator to 18,450 kc. Adjust output of signal generator until same indication is obtained on multimeter as in step 1. | Attenuator of R. F. Signal Generator Set AN/URM-25 | ____ μ V (Above 2000) |
| | | Adjust signal generator to 18,700 kc. Adjust output of signal generator until same indication is obtained on multimeter as in step 1. | Attenuator of R. F. Signal Generator Set AN/URM-25 | ____ μ V (Above 1900) |
| | | Adjust signal generator to 18,750 kc. Adjust output of signal generator until same indication is obtained on multimeter as in step 1. | Attenuator of R. F. Signal Generator Set AN/URM-25 | ____ μ V (Above 2000) |
| | | NOTE After completing these tests, replace crystal in receptacle at front of receiver. | | |

* NOTE: Calibrate Signal Generator AN/URM-25 with Navy Model LM Crystal Calibrated Frequency Indicating Equipment.

Steps ① and ②

Rear View of Receiver



R-F SECTION

Operating Conditions and Control Settings:

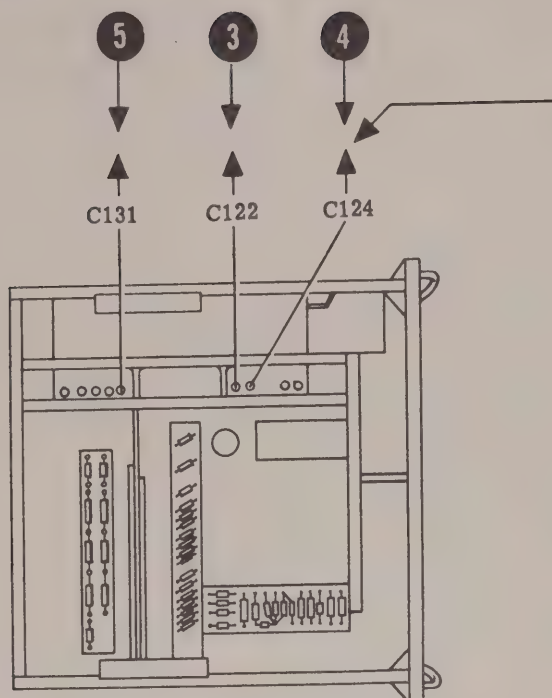
As given in Special Procedures.

Test Equipment Required:

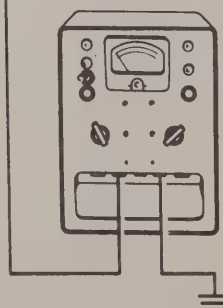
R. F. Signal Generator Set AN/URM-26
 Multimeter AN/USM-34
 Frequency Meter TS-186/UP
 Headphone
 Output Meter TS-585/U

| STEP | | PRELIMINARY ACTION | READ INDICATION ON | REF. STD. |
|----------|------------------------------------|---|----------------------------|---|
| NO. | ACTION REQUIRED | | | |
| 1 | Record overall receiver bandwidth. | <p>Disable receiver a-v-c circuit by replacing tube V206 with a type 6AL5W tube from which pin 7 (a-v-c detector plate) has been clipped off (this tube should be clearly marked to indicate it is for test purposes only). Set Output Meter TS-585/U to 50-milliwatt range and impedance to 600-ohms. Modulate signal generator 30% at 1000-cycles, and adjust r-f output to 147.5 mc. Connect equipment as shown on opposite page. Tune receiver to same frequency as generator (indicated by a peak on output meter). Set signal generator r-f output to indicate exactly 10-milliwatt on Output Meter TS-585/U.</p> <p style="text-align: center;">Note</p> <p>The remainder of this procedure requires very delicate adjustment of the signal generator and must be performed with extreme care.</p> <p>Slowly increase r-f frequency until indication drops 6-decibels. Determine exact signal generator output frequency using frequency meter, and record at (a). Slowly decrease signal generator r-f frequency below 147.5 mc until output meter indication again drops 6-decibels below maximum, determine exact frequency and record at (b). Take the difference of the two frequencies and record at (c) as the bandwidth.</p> | Frequency Meter TS-323/UR | (a) _____ mc (b) _____ mc BAND-WIDTH (c) _____ kc (120 to 135) |
| 2 | Record receiver sensitivity (Sr). | <p>Leaving equipment connected as in step 1, tune signal generator to 113.5 mc and receiver to same frequency. With no r-f output from signal generator adjust receiver A. F. LEVEL control (R238) until Output Meter TS-585/U indicates 1-milliwatt. Carefully adjust signal generator output level (while switching modulation on and off) until that minimum setting is reached which produces a difference in indication on Output Meter TS-585/U of 10-decibels. Record signal generator output level at (a). Repeat procedure at 147.5 mc and record at (b). Repeat procedure at 181.5 mc and record at (c).</p> | Signal Generator AN/URM-26 | (a) _____ μ v (b) _____ μ v (c) _____ μ v (3 max) |

Steps 3 thru 5



Bottom View of Receiver Chassis

Multimeter
AN/USM-34

AN/URR-27

Steps **3** thru **5**

R-F SECTION

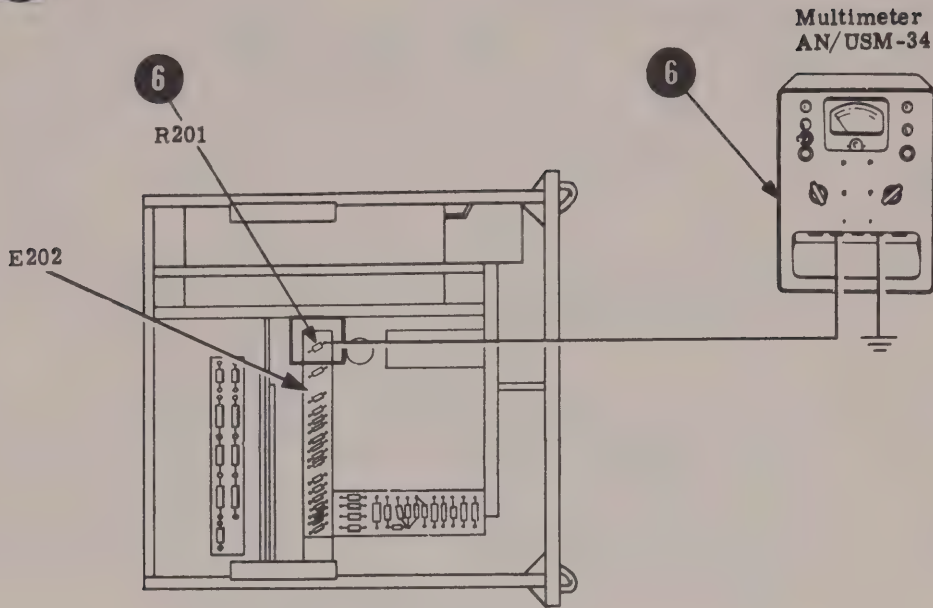
Operating Conditions and Control Settings:

As given in Special Procedures.

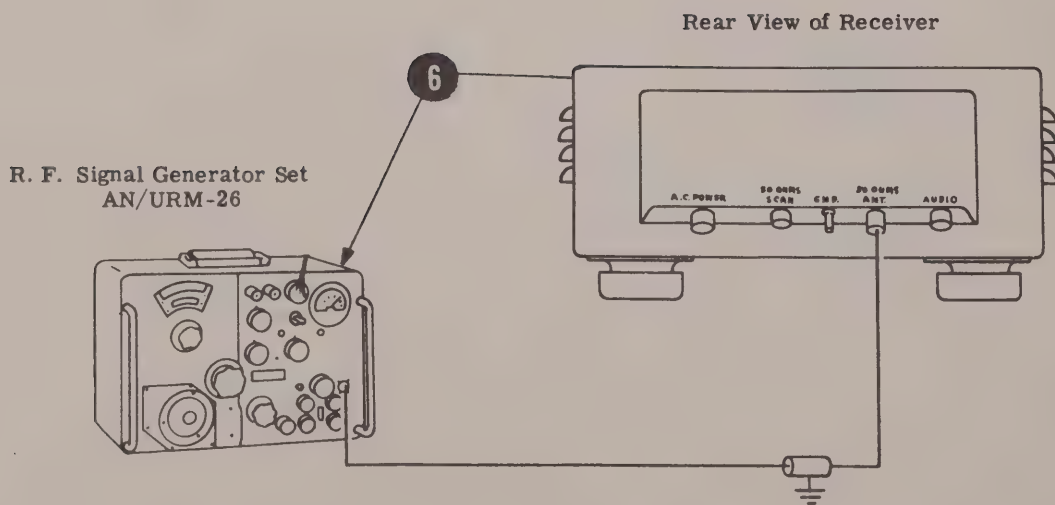
| STEP | | PRELIMINARY ACTION | READ INDICATION ON | REF. STD. |
|----------|---------------------------------------|--|--------------------------|-------------------------|
| NO. | ACTION REQUIRED | | | |
| 3 | Record doubler grid voltage. | Tune receiver to 190 mc, and connect multimeter as shown on opposite page. Set multimeter to X10 scale, -DC. | Multimeter AN/USM-34 | ____ VDC (-4 to -7) |
| 4 | Record buffer amplifier grid voltage. | With receiver adjusted as in step 2, connect multimeter as shown on opposite page (step 3). | Multimeter AN/USM-34 | ____ VDC (-7 to -11) |
| 5 | Record tripler grid voltage. | With receiver adjusted as in step 2, connect multimeter as shown on opposite page (step 4). | Multimeter AN/USM-34 | ____ VDC (-6 to -8) |

ORIGINAL

Step **6**



Bottom View of Receiver Chassis



Rear View of Receiver

AN/URR-27

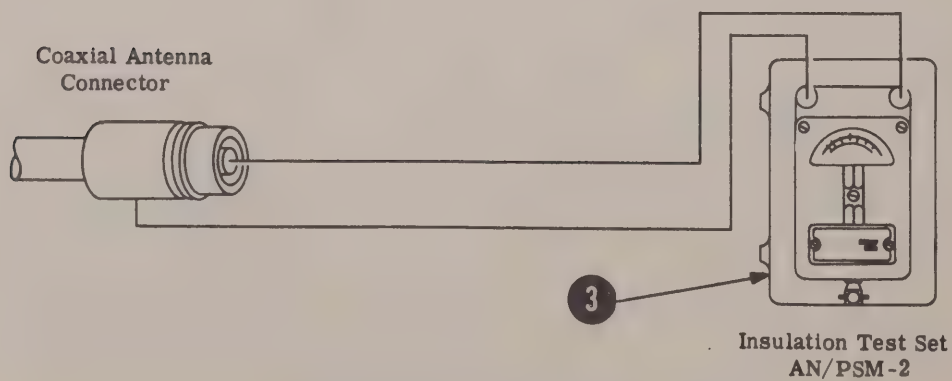
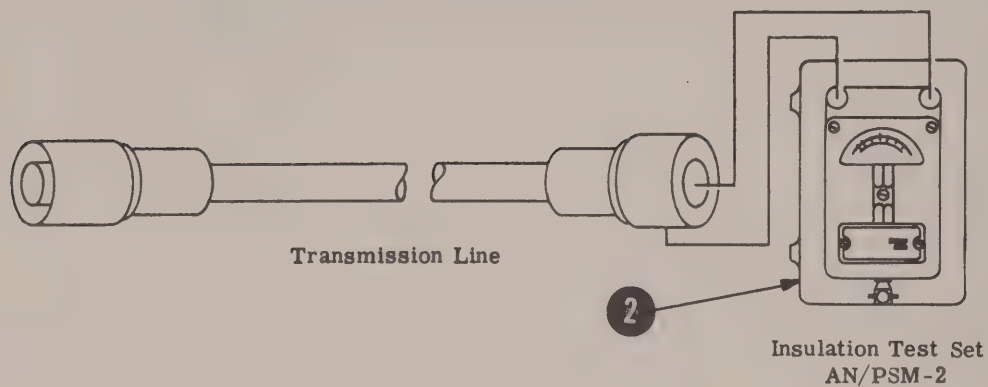
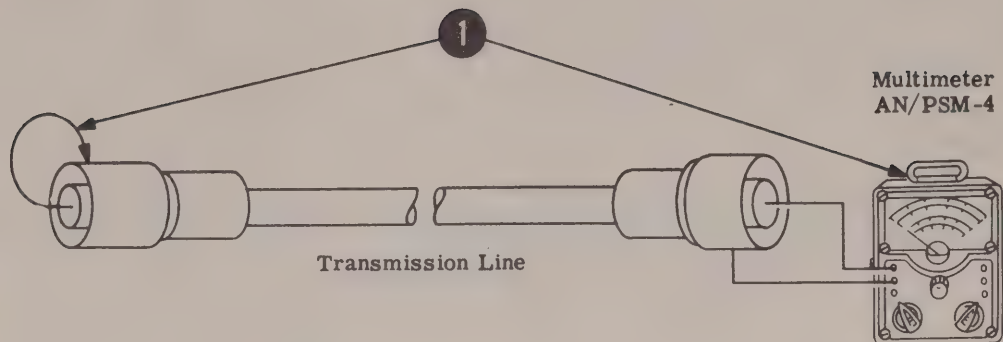
Step **6**

R-F SECTION

Operating Conditions and Control Settings:

As given in Special Procedures.

| STEP | | PRELIMINARY ACTION | READ INDICATION ON | REF. STD. |
|----------|---------------------------|--|--|-------------------------------|
| NO. | ACTION REQUIRED | | | |
| 6 | Record a-v-c sensitivity. | Connect test equipment as shown on opposite page. Set multimeter to X10 scale, -DC. Set r-f output of signal generator to 0. | Multimeter AN/USM-34 | ____ VDC (-2.5 to -3.5) |
| | | Advance signal-generator output until multimeter indicates -5 volts. | Attenuator of R. F. Signal Generator Set AN/URM-26 | ____ μ V (400 to 600) |

Steps **1** thru **3**

AN/URR-27

Steps **1** thru **3**

ANTENNA AND TRANSMISSION LINE

Operating Conditions and Control Settings:

Test Equipment Required:

Equipment de-energized and antenna and transmission line disconnected.

Multimeter AN/PSM-4
Insulation Test Set AN/PSM-2

| STEP | | PRELIMINARY ACTION | READ INDICATION ON | REF. STD. |
|----------|--|---|------------------------------|---|
| NO. | ACTION REQUIRED | | | |
| 1 | Record resistance of transmission line. | Connect equipment as shown on opposite page. Set multimeter function switch to Rx1. * | Multimeter AN/PSM-4 | _____ ohm (See note at bottom of chart.) |
| 2 | Record insulation resistance of transmission line. | Connect equipment as shown on opposite page. | Insulation Test Set AN/PSM-2 | _____ meg (Above 50) |
| 3 | Record insulation resistance of antenna. | Connect equipment as shown on opposite page. | Insulation Test Set AN/PSM-2 | _____ meg (Above 50) |

* When recording the resistance of the transmission line, the jumper wire must be connected from the inner conductor to the outer conductor. This method of connection provides continuity from the meter, through the inner conductor, the jumper wire, and the outer conductor, back to the meter. The resistance reading will therefore be the resistance of both the outer and inner conductors combined. The resistance reading obtained in this step depends upon the length and type of transmission line, but will be only a fraction of an ohm.

REPORT ALL FAILURES

Failure reports must be promptly filled in and immediately mailed to Electronics Division, Bureau of Ships.

HERE ARE THE REASONS

BUSHIPS uses the information for:

Every Failure Report is a boost for you because:

1. Evaluation of present equipment.
2. Design of future equipment.
3. Ordering of replacement parts.
4. Preparation of Field Changes.
5. Publication of the information for use throughout the fleet.

1. It shows that you are doing your job.
2. It helps make your work easier.
3. It gives you a chance to pass your knowledge to every man on the team.
4. It helps to prepare you for the next higher rating.

| REPORT THE FAILURE OF ONLY ONE PART OR TUBE ON THIS FORM | | | | | | | |
|--|--|--|--|---|--|--|--|
| 1. REPORT NO. | | 2. REPORTING ACTIVITY | | 3. REPAIRED OR REPORTED BY (NAME) | | 4. DATE OF FAILURE | |
| 5. EQUIPMENT INSTALLED IN (TYPE AND NO.) | | | | 6. TIME METER READING OR INSTALLATION LOG TIME | | 7. WAS MISSION ABORTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| EQUIPMENT | | 9. MODEL DESIGNATION AND MOD. NO. | | 10. SERIAL NO. | | 11. CONTRACTOR | |
| COMPONENT (MAJOR UNIT) | | 13. MODEL DESIGNATION AND MOD. NO. | | 14. SERIAL NO. | | 15. CONTRACTOR | |
| ASSEMBLY OR SUBASSEMBLY | | 17. ASSEMBLY AND MOD. NO. | | 18. SERIAL NO. | | 19. MANUFACTURER | |
| 21. PART NAME OR TUBE TYPE | | 22. STOCK NO. (FAILED ITEM) | | 23. PART REF. DESIG. (V-101, R-101, ETC.) | | 24. REPAIR TIME (MAN-HOURS) | |
| PART DATA | | 25. HOURS IN SERVICE | | 26. MANUFACTURER OF FAILED PART | | 27. SERIAL NO. | |
| | | | | | | 28. WAS REPLACEMENT PART AVAILABLE LOCALLY <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| 29. FIRST INDICATION OF TROUBLE | | 30. CHECK TYPE(S) OF TUBE OR PART FAILURE | | 31. CAUSE OF FAILURE | | | |
| 1 <input type="checkbox"/> INOPERATIVE | | 007 <input type="checkbox"/> ARCING | | 001 <input type="checkbox"/> GASSY | | 790 <input type="checkbox"/> OUT OF ADJUST. | |
| 2 <input type="checkbox"/> INTERMITTENT | | 710 <input type="checkbox"/> BEARING FAILURE | | 300 <input type="checkbox"/> GROUNDED | | 006 <input type="checkbox"/> SHORTED | |
| 3 <input type="checkbox"/> LOW PERFORMANCE | | 780 <input type="checkbox"/> BENT | | 380 <input type="checkbox"/> LEAKAGE | | 770 <input type="checkbox"/> SLIP RING OR COMMUTATOR FAILURE | |
| 4 <input type="checkbox"/> NOISY | | 040 <input type="checkbox"/> BINDING | | 730 <input type="checkbox"/> LOOSE | | 018 <input type="checkbox"/> TESTED OK DID NOT WORK | |
| 5 <input type="checkbox"/> OFF FREQUENCY | | 070 <input type="checkbox"/> BROKEN | | 004 <input type="checkbox"/> LOW ON OR EMISSION | | 020 <input type="checkbox"/> WORN EXCESSIVELY | |
| 6 <input type="checkbox"/> OUT OF ADJUSTMENT | | 720 <input type="checkbox"/> BRUSH FAILURE | | 750 <input type="checkbox"/> MISSING | | <input type="checkbox"/> SEE INSIDE FLAP FOR ADDITIONAL CODES | |
| 7 <input type="checkbox"/> OVERHEATING | | 080 <input type="checkbox"/> BURNED OUT | | 008 <input type="checkbox"/> NOISY | | 32. WAS THE PART REPLACED DURING PREVENTIVE MAINTENANCE? <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| 8 <input type="checkbox"/> UNSTABLE | | 130 <input type="checkbox"/> CHANGED VALUE | | 450 <input type="checkbox"/> OPEN | | | |
| 9 <input type="checkbox"/> OTHER | | 170 <input type="checkbox"/> CORRODED | | 099 <input type="checkbox"/> OTHER | | | |
| 33. REMARKS (Continue on reverse side if necessary) | | | | | | | |
| DD (1 AUG 54) 787 | | | | | | | |
| ELECTRONIC FAILURE REPORT A15807 | | | | | | | |

AN/URR-27

MAINTENANCE STANDARDS PART II, PREVENTIVE

MAINTENANCE CHECK-OFF

This part of the book contains check procedures to be performed by the maintenance technician or operator; the procedures are scheduled for regular periods (daily, weekly, etc.). Accompanying each step or group of steps is a two-year time-schedule table. When initially entering the results of the checks in the first blank column of the table, the appropriate date should also be entered at the top of that column. Appropriate dates should be entered at the top of subsequent columns when required.

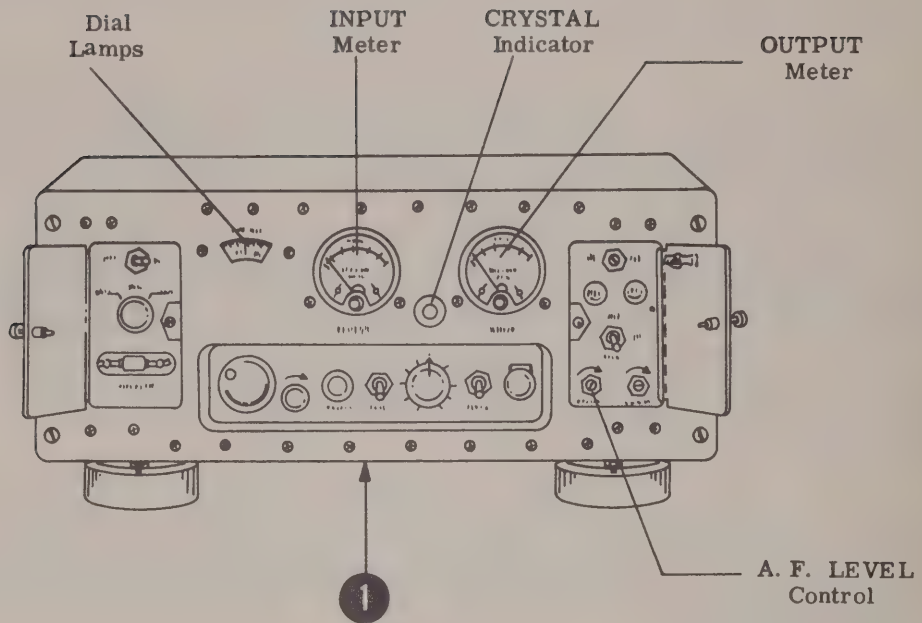
Various checks (indicated by O.M.) may be performed as part of the Operational Maintenance Program by operating personnel. At the top-right of the first chart page for each period is a list of test equipment, if any, required to perform the procedure within that period. At the top-left of each chart page is a list of operating conditions and control settings. These apply to the entire page unless other conditions and settings are given for some of the steps.

The step numbers of the procedures are enclosed in circles, for easy tie-in with corresponding "step" numbers shown on the accompanying illustrations of equipment setups. Arrows leading from a given "step" number on the illustration graphically present certain basic information given in the associated step of the chart, as follows: The point where the test equipment is to be connected; the setting of the pertinent control or switch; and the indicator from which the test reading is to be taken.

Upon completing each check as prescribed in the charts, the results should be entered in the time-schedule tables accompanying the charts. These entries are of prime importance, for they indicate whether or not the equipment is performing at maximum efficiency. Comparison of a given reading with readings previously obtained, and with the initial maintenance test indications (Part I), will quickly reveal any significant change. It is expected that the readings will show nominal variances from time to time. This does not necessarily mean that the equipment is operating improperly. If, however, a particular step shows a reading which varies progressively in the same direction every time the check is made, it is an indication of improper operation or of impending failure, and corrective measures should be taken.

Whenever a Preventive Maintenance Check-Off test requires the same procedure as that of a step given in the Test Procedures and Maintenance References part of this book, the technician is directed to perform that step. The results obtained by the technician should be exactly the same as those already recorded in the referenced step, except for nominal variances. The results of the test, for any steps so referenced, should be entered in the usual way, in Part II of this book, in the time-schedule tables provided.

Step **1**



Front View of Receiver

AN/URR-27

Step **1**

Operating Conditions and Control Settings:

Test Equipment Required:

As given in Special Procedures.

None

| STEP | | PROCEDURE |
|-------------------|--|---|
| NO. | ACTION REQUIRED | |
| 1 O. M. | Perform operational check on receiver. | Allow receiver to warm up for approximately three minutes. Dial lamps will light and if crystal control is being used CRYSTAL lamp (I503) will light. Tune receiver off signal, set SILENCER control (R233) to maximum clockwise position. Set SILENCER switch (S501) to IN. Noise in phones should disappear. Set SILENCER switch (S501) to OUT. Noise should be heard in phones. With OSC switch (S203) set to MANUAL tune in signal. Indication of INPUT meter (M501) and OUTPUT meter (M502) should increase. |

Time Schedule: Check (✓) and initial.

Approx Time Req'd for Daily Check — 5 min

1st Year of Operation

| Day | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
| Initial | | | | | | | | | | | | |

O. M. — Designates operational maintenance checks

ORIGINAL

Step **1**

Operating Conditions and Control Settings:

As given in Special Procedures.

| STEP | | PROCEDURE |
|-------------------|--|---|
| NO. | ACTION REQUIRED | |
| 1 O. M. | Perform operational check on receiver. | Allow receiver to warm up for approximately three minutes. Dial lamps will light and if crystal control is being used CRYSTAL lamp (I503) will light. Tune receiver off signal, set SILENCER control (R233) to maximum clockwise position. Set SILENCER switch (S501) to IN. Noise in phones should disappear. Set SILENCER switch (S501) to OUT. Noise should be heard in phones. With OSC switch (S203) set to MANUAL tune in signal. Indication of INPUT meter (M501) and OUTPUT meter (M502) should increase. |

Time Schedule: Check (✓) and initial.

2nd Year of Operation

| Day | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | |
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| 18 | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | |
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| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
| Initial | | | | | | | | | | | | |

O. M. —Designates operational maintenance checks

Operating Conditions and Control Settings:

Test Equipment Required:

As given in Special Procedures.

Multimeter AN/PSM-4

| STEP | | PROCEDURE |
|------|------------------------------------|--|
| NO. | ACTION REQUIRED | |
| 1 | Record --3-volt bias voltage. | Perform step 2 of Section A, Part I. Obtain correct indication and record. |
| 2 | Record B supply voltage. | Perform step 3 of Section A, Part I. Obtain correct indication and record. |
| 3 | Record regulated B supply voltage. | Perform step 4 of Section A, Part I. Obtain correct indication and record. |

Time Schedule: Record and initial.

Approx Time Req'd for Weekly Checks — 30 min

1st Year of Operation

| Week | Step | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| 2 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| 3 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| 4 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| 5 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| Initial | | | | | | | | | | | | | |

Steps **1** thru **3**

Operating Conditions and Control Settings:

As given in Special Procedures.

| STEP | | PROCEDURE |
|----------|------------------------------------|--|
| NO. | ACTION REQUIRED | |
| 1 | Record —3-volt bias voltage. | Perform step 2 of Section A, Part I. Obtain correct indication and record. |
| 2 | Record B supply voltage. | Perform step 3 of Section A, Part I. Obtain correct indication and record. |
| 3 | Record regulated B supply voltage. | Perform step 4 of Section A, Part I. Obtain correct indication and record. |

Time Schedule: Record and initial.

2nd Year of Operation

| Week | Step | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ |
|---------|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| 2 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| 3 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| 4 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| 5 | 1 | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | |
| Initial | | | | | | | | | | | | | |

Operating Conditions and Control Settings:

Test Equipment Required:

As given for referenced steps.

Multimeter AN/USM-34
R.F. Signal Generator Set. AN/URM-26
Insulation Test Set AN/PSM-2

| STEP | | PROCEDURE |
|------|--|--|
| NO. | ACTION REQUIRED | |
| 1 | Record resistance of transmission line. | Perform step 1 of Section E, Part I. Obtain correct indication and record. |
| 2 | Record insulation resistance of transmission line. | Perform step 2 of Section E, Part I. Obtain correct indication and record. |
| 3 | Record insulation resistance of antenna. | Perform step 3 of Section E, Part I. Obtain correct indication and record. |

Time Schedule: Record and initial.

Approx Time Req'd for Monthly Checks — 2 hr

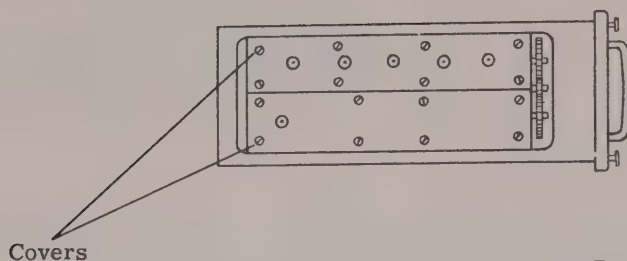
1st Year of Operation

[illegible]

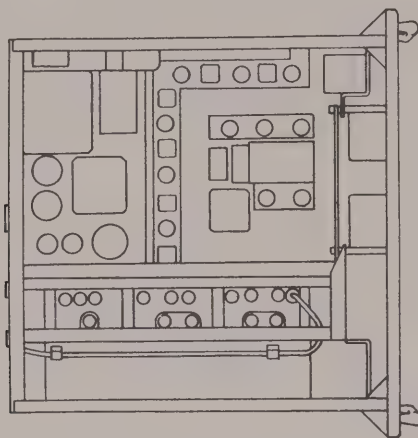
2nd Year of Operation

[illegible]

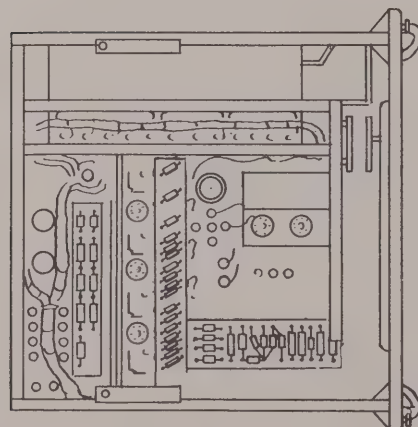
Step **5**



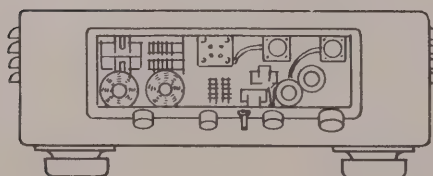
Receiver Chassis,
View of Left Side



Receiver Chassis,
Top View



Receiver Chassis,
Bottom View



View of Band
Suppression Filter

AN/URR-27

Step **5**

Operating Conditions and Control Settings:

POWER switch (S502): OFF

| STEP | | PROCEDURE |
|----------|--|--|
| NO. | ACTION REQUIRED | |
| 5 | Clean interior and exterior of receiver. Check general condition of component parts. | Using a vacuum cleaner or a clean, compressed-air blower, remove all dust, dirt, and foreign matter from chassis surface, all accessible tubes, and component parts. Do not disturb wiring when performing cleaning routine. To do so may detune circuits, and thus cause improper operation. Remove cover from band-suppression filter at rear of case, remove cover of preselector and oscillator unit, and blow away dust, dirt, and foreign matter which may have collected. Examine all resistors, capacitors, coils, and transformers for swelling, discoloration, overheating, leaking, poor connection, and corrosion. Clean and examine connectors at rear of receiver chassis and on band-suppression filter. Corrosion may be removed with the aid of sandpaper. If any paint is chipped from case, bare spot should be sanded clean and repainted with approved paint. |

Time Schedule: Check (✓) and initial.

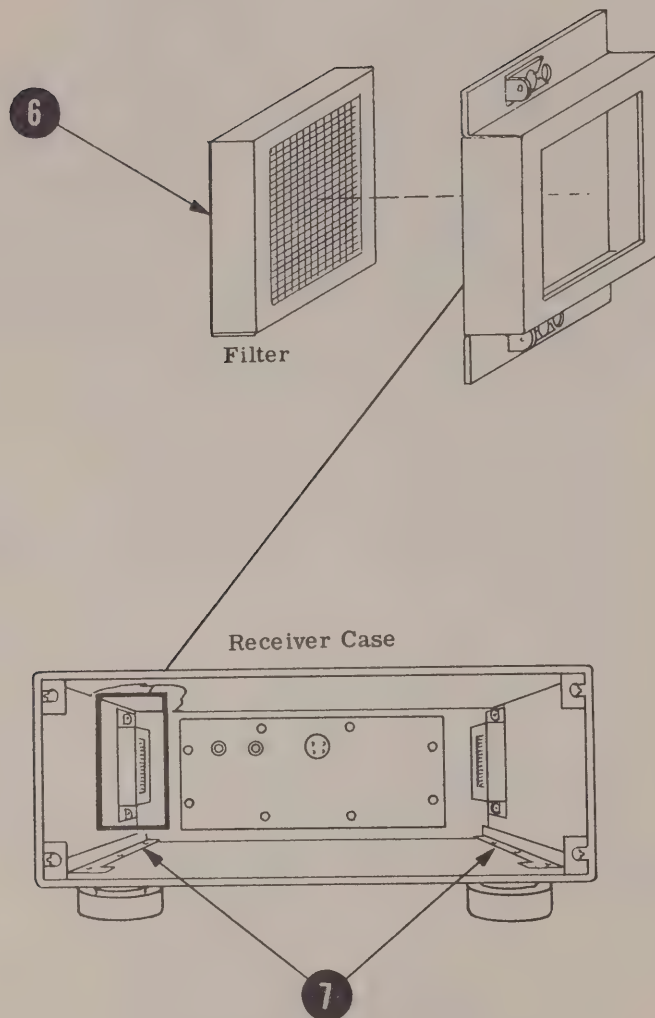
1st Year of Operation

| Month | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Step 5 | | | | | | | | | | | | |
| Initial | | | | | | | | | | | | |

2nd Year of Operation

| Month | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Step 5 | | | | | | | | | | | | |
| Initial | | | | | | | | | | | | |

Steps **6** and **7**



Operating Conditions and Control Settings:

POWER switch (S502): OFF

| STEP | | PROCEDURE |
|-------------------|----------------------------|---|
| NO. | ACTION REQUIRED | |
| 6 O. M. | Clean air filters. | Remove receiver chassis from case. From inside of case, remove the two air filters by sliding snap-type fasteners and gently lifting away from the walls. Using compressed air or a vacuum cleaner, remove all foreign material. Dip air filters into approved solvent, P-S-661, type II, and swirl to run solvent through filter element. Withdraw filters from solvent, shake off excess and dry thoroughly. Insert filters into case, noting arrows printed on filter showing direction of air flow, and fasten securely with the snap-type fasteners. |
| 7 O. M. | Lubricate receiver guides. | Using a clean cloth, wipe guides shown in illustration on opposite page. Apply a very thin coating of Navy Type MIL-G-18709 Grease to the guides. Wipe off excess. Reassemble receiver. |

Time Schedule: Check (✓) and initial.

1st Year of Operation

| Month | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Step 6 | | | | | | | | | | | | |
| Step 7 | | | | | | | | | | | | |
| Initial | | | | | | | | | | | | |

2nd Year of Operation

| Month | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ | 19__ |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Step 6 | | | | | | | | | | | | |
| Step 7 | | | | | | | | | | | | |
| Initial | | | | | | | | | | | | |

O. M. —Designates operational maintenance checks

Steps **1** and **2**

Operating Conditions and Control Settings:

Test Equipment Required:

As given in Special Procedures.

Audio Oscillator TS-382/U

Multimeter AN/USM-34

R. F. Signal Generator Set AN/URM-25

R. F. Signal Generator Set AN/URM-26

| STEP | | PROCEDURE |
|----------|--|---|
| NO. | ACTION REQUIRED | |
| 1 | Record audio gain. | Perform step 1 of Section B, Part I. Obtain correct indication and record. |
| 2 | Record audio response at high and low ends of range. | Perform step 2 of Section B, Part I. Obtain correct indications and record. |

Time Schedule: Record and initial.

Approx Time Req'd for Quarterly Checks — 1 hr

1st Year

2nd Year

| Quarter | Quarter 19__ | Quarter 19__ | Quarter 19__ | Quarter 19__ | Quarter 19__ | Quarter 19__ | Quarter 19__ * | Quarter 19__ |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|
| Step 1 | | | | | | | | |
| Step 2 | L | | | | | | | |
| | H | | | | | | | |
| Initial | | | | | | | | |

*REORDER NOTICE

Upon completion of the third quarterly check of the second year, order a new copy of this book for the next two-year period from the nearest District Publications and Printing Office.

Operating Conditions and Control Settings:

As given in Special Procedures.

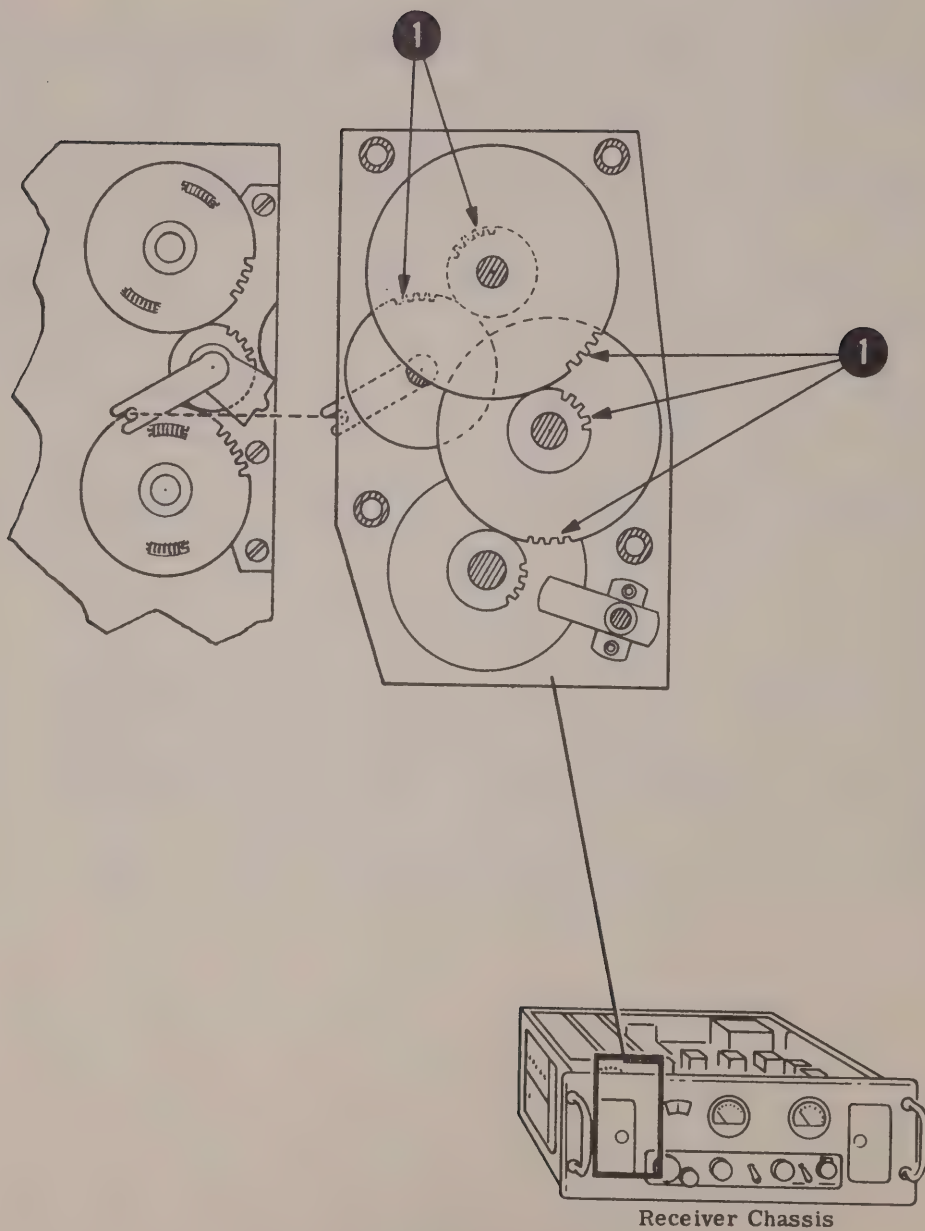
| STEP | | PROCEDURE |
|----------|---------------------------------------|---|
| NO. | ACTION REQUIRED | |
| 3 | Record operation of silencer circuit. | Perform step 3 of Section B, Part I. Obtain correct indication and record. |
| 4 | Record i-f gain. | Perform step 1 of Section C, Part I. Obtain correct indication and record. |
| 5 | Record receiver bandwidth. | Perform step 1 of Section D, Part I. Obtain correct indications and record. |
| 6 | Record receiver sensitivity (Sr). | Perform step 2 of Section D, Part I. Obtain correct indications and record. |
| 7 | Record a-v-c sensitivity. | Perform step 6 of Section D, Part I. Obtain correct indication and record. |

Time Schedule: Record and Initial.

| 1st Year of Operation | | | | | 2nd Year of Operation | | | |
|-----------------------|------------------|------------------|------------------|------------------|-----------------------|------------------|------------------|------------------|
| Quarter | —Quarter 19__ | —Quarter 19__ | —Quarter 19__ | —Quarter 19__ | —Quarter 19__ | —Quarter 19__ | —Quarter 19__ | —Quarter 19__ |
| Step 3 | | | | | | | | |
| Step 4 | | | | | | | | |
| Step 5 | (a) | | | | | | | |
| | (b) | | | | | | | |
| | (c) | | | | | | | |
| Step 6 | (a) | | | | | | | |
| | (b) | | | | | | | |
| | (c) | | | | | | | |
| Step 7 | | | | | | | | |
| Initial | | | | | | | | |

Step

1



AN/URR-27

Step **1**

Operating Conditions and Control Settings:

Test Equipment Required:

Equipment de-energized.

None

| STEP | | PROCEDURE |
|-------------------|------------------------------------|---|
| NO. | ACTION REQUIRED | |
| 1 O. M. | Lubricate receiver dial mechanism. | Clean dial drive mechanism, using small brush and Dry Cleaning Solvent P-S-661, starting at the top of gear train, and working down. Using small camel's hair brush, apply Navy Type MIL-G-18709 grease to gears which are accessible. Work grease into tuning mechanism by turning front panel control to both extreme positions a few times. Wipe off any excessive grease with brush. Reinsert receiver chassis into case and fasten securely. |

Time Schedule: Check (✓) and initial.

Approx Time Req'd for Semiannual Checks — 1 hr

| Semi-Annual | 1st Year | | 2nd Year | |
|---------------|----------------------|----------------------|----------------------|----------------------|
| | ____ Half 19 ____ | ____ Half 19 ____ | ____ Half 19 ____ | ____ Half 19 ____ |
| Step 1 | | | | |
| Initial | | | | |

O. M. —Designates operational maintenance checks

